CLAIMS

I claim:

1. A method for defining a markup language representation of state chart data comprising the steps of:

loading state chart data corresponding to a state chart diagram through an interface to a state machine modeling tool;

generating header and footer data in accordance with a selected markup language;

for each state specified in said state chart data, retrieving a state name and state transition data from said state chart data;

formatting said retrieved state names and corresponding state transition data according to said selected markup language; and,

saving said header and footer data, and said formatted state names and state transition data in an document formatted according to said selected markup language.

2. The method of claim 1, further comprising the steps of:

for each state specified in said state chart data, extracting a composite state action;

parsing said composite state action into individual state actions;

formatting each individual state action according to said selected markup language; and,

saving said formatted individual state actions in said document.

3. The method of claim 1, wherein said selected markup language is the extensible markup language (XML).

4. The method of claim 1, wherein said state chart diagram is a unified modeling language (UML) specified state chart.

1 5. The method of claim 3, further comprising the step of defining a document type

2 definition (DTD) which defines XML elements for use in formatting said state chart data.

1 6. The method of claim 5, wherein said formatting step comprises formatting said

2 retrieved state names and corresponding state transition data according to said XML

3 elements defined in said DTD.

1 7. A system for defining a markup language representation of state chart data

2 comprising:

3   a state machine modeling tool for generating state chart data; and,

4   an add-in script to said state machine modeling tool for formatting said state

5 chart data into a markup language representation according to a selected markup

6 language.

1 8. The system of claim 7, wherein said selected markup language is the extensible

2 markup language (XML).

1 9. The system of claim 8, wherein said generated state chart data is unified

2 modeling language (UML) specified state chart data.

1 10. The system of claim 8, further comprising a document type definition (DTD)

2 which defines XML elements for use in formatting said state chart data into said markup

3 language representation.

1 11. A system for linking a state machine modeling tool with a state machine run-time

2 engine comprising:

3   a state chart diagram generated by the state machine modeling tool, said state

4 chart diagram comprising state chart data, said state chart data comprising state chart

5 names, transition data and composite state actions;

6   a state action parser for parsing said composite state actions into component

7   state actions; and,

8   a markup language formatter for formatting said state chart data and component

9   state actions according to a selected markup language.

1   12.   The system of claim 11, wherein said state chart diagram is a unified modeling

2   language (UML) specified state chart diagram.

1   13.   The system of claim 11, wherein said selected markup language is the

2   extensible markup language (XML).

1   14.   A state machine system comprising:

2   a state machine modeling tool, said modeling tool producing unified modeling

3   language (UML) specified state chart diagrams;

4   a conversion script add-in to said state machine modeling tool, said add-in

5   defining markup language representations of said UML specified state chart diagrams

6   produced by said state machine modeling tool; and,

7   a state machine run-time engine which is separate from said state machine

8   modeling tool, said run-time engine executing said markup language representations

9   defined by said add-in.

1   15.   The system of claim 14, wherein said markup language representations are

2   extensible markup language (XML) representations of said UML specified state chart

3   diagrams.

1   16.   A machine readable storage, having stored thereon a computer program for

2   defining a markup language representation for state chart data, said computer program

3   having a plurality of code sections executable by a machine for causing the machine to

4   perform the steps of:

5   loading state chart data corresponding to a state chart diagram through an

6   interface to a state machine modeling tool;

7   generating header and footer data in accordance with a selected markup

8   language;

9   for each state specified in said state chart data, retrieving a state name and state

10   transition data from said state chart data;

11   formatting said retrieved state names and corresponding state transition data

12   according to said selected markup language; and,

13   saving said header and footer data, and said formatted state names and state

14   transition data in an document formatted according to said selected markup language.

1   17.   The machine readable storage of claim 16, further comprising the steps of:

2   for each state specified in said state chart data, extracting a composite state

3   action;

4   parsing said composite state action into individual state actions;

5   formatting each individual state action according to said selected markup

6   language; and,

7   saving said formatted individual state actions in said document.

1   18.   The machine readable storage of claim 16, wherein said selected markup

2   language is the extensible markup language (XML).

1   19.   The machine readable storage of claim 16, wherein said state chart diagram is a

2   unified modeling language (UML) specified state chart.

1   20.   The machine readable storage of claim 18, further comprising the step of

2   defining a document type definition (DTD) which defines XML elements for use in

3   formatting said state chart data.

1   21.   The machine readable storage of claim 20, wherein said formatting step

2   comprises formatting said retrieved state names and corresponding state transition

3   data according to said XML elements defined in said DTD.